

HORIZONTAL WIND GENERATOR

CLAIMS

I claim:

1. A horizontal wind generator comprising:

a horizontal windmill comprising:

a generally vertical drive shaft mounted for rotation about a vertical axis;

at least one wind drive unit mounted in a wind catching position on the drive shaft, the wind drive unit including a transverse cross member non-rotatably attached to the drive shaft, and at least two wind catcher elements mounted on the cross member on opposite sides of the pole and spaced radially outwardly therefrom, each wind catcher element having front and rear sides, with the front side presenting greater resistance to wind flow thereover than the rear side when the sides are facing in an upwind direction, the wind catcher elements on each side of the cross member facing in opposite directions, such that a wind urges the drive unit to rotate in a direction wherein the upward facing front side is moving in a downwind direction; and

an electrical generator drivingly connected to the drive shaft so as to produce electrical energy in response to the rotation of the drive shaft.

2. A horizontal wind generator as in claim 1 wherein the wind catcher elements comprise open-ended C-shaped members.

3. A horizontal wind generator as in claim 2 wherein the cross member comprises a rectangular frame having upper and lower horizontal members, with the C-shaped members having upper and lower sides attached respectively to the upper and lower horizontal members.

4. A horizontal wind generator as in claim 1 wherein the C-shaped members comprise tubular members that are split longitudinally substantially in half.

5. A horizontal wind generator as in claim 4 wherein the C-shaped members comprise longitudinally split 55 gallon plastic drums with the ends removed.

6. A horizontal wind generator as in claim 1 wherein the generator includes a first set of two drive units angularly displaced at a 90° angle from each other.

7. A horizontal wind generator as in claim 6 wherein the generator includes a second set of two drive units angularly displaced from each other by a 90° angle, with the second set being displaced from the first set by a 45° angle.

8. A horizontal wind generator as in claim 1 wherein the drive shaft is mounted on a thrust bearing at a lower end, the drive shaft being maintained in a vertical position by one or more vertical supports comprising a plurality of at least three rotatable wheels mounted for rotation about the axis of the drive shaft and angularly spaced around the periphery of the drive shaft.

9. A horizontal wind generator as in claim 1 wherein the wind catcher elements comprise longitudinally positioned half barrels with closed ends.

10. A horizontal wind generator as in claim 1 wherein the wind catcher elements comprise bowl-shaped elements.